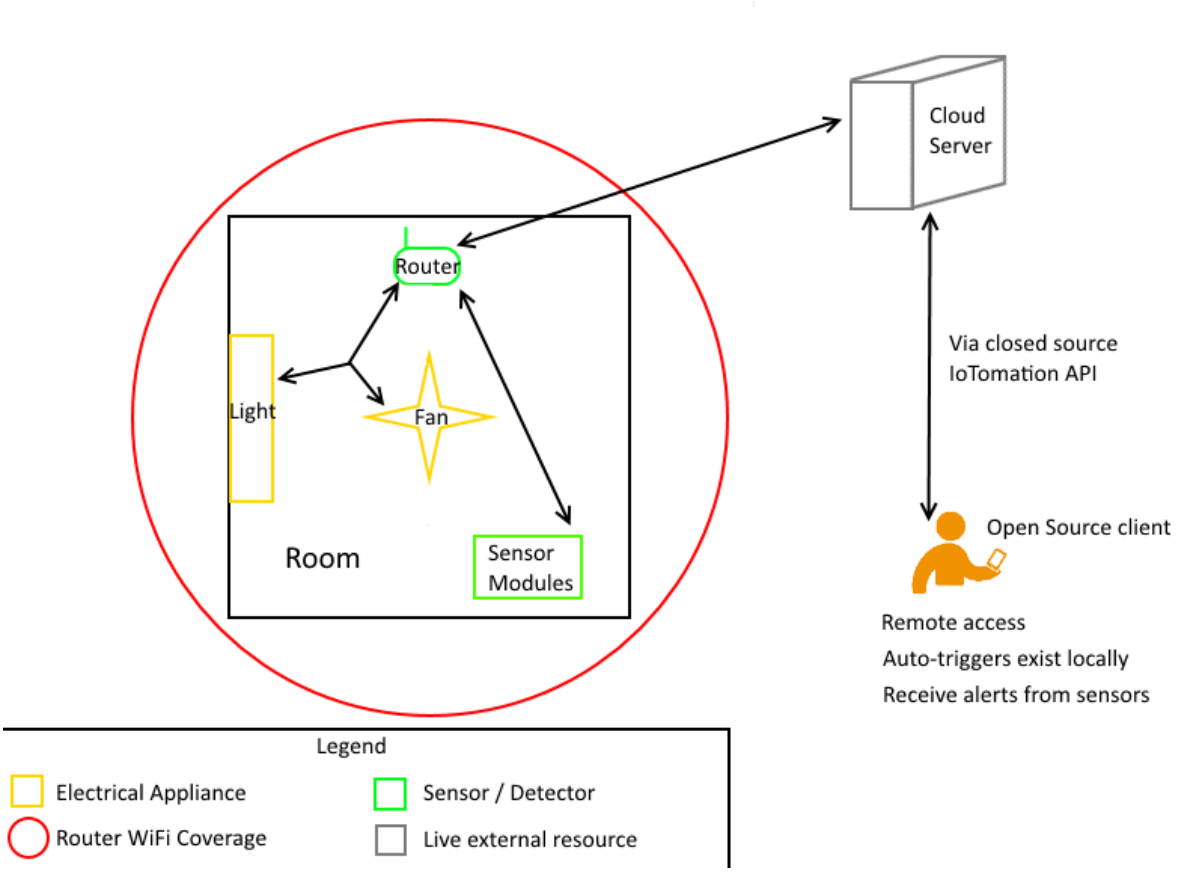
IoTomate

A solution for remote/automatic indoor appliance management.



Project Blueprint

Project Budget = 20$

Project Features :

Each individual obtains his/her own profile that can be customized.
To begin customization, the user begins by adding all his appliances and sensors in their appropriate categories.
For each appliance by itself, remote access will exist.
For each sensor, appliances can be configured to trigger a function based on the values the sensor provides.

Profile also contains statistics such as total run time of each appliance, max temperature etc.

Hardware API Spec :

There are two categories of hardware submodules :

- An appliance
  - Receives getstatus requests
  - Also receives setstatus requests
- A sensor
  - Receives only getstatus requests

AddDevice :

Request Syntax -

```
{
    “request”: “adddevice”,
    “type”: “<appliance/sensor>”,
    “id”: "<device id>",
    “mapto”: “<internal device specific id>”,
    “hash”: “<client hash>”
}
```

Response Syntax -

```
{
    “response”: “adddevice”,
    “success”: <bool value>
}
```

RemoveDevice :

Request Syntax -

```
{
    “request”: “removedevice”,
    “id”: "<device id>",
    “hash”: “<client hash>”
}
```

Response Syntax -

```
{
    “response”: “removedevice”,
    “success”: <bool value>
}
```

GetStatus :

Request Syntax -

```
{
    “request”: “getstatus”,
    “id”: "<device id>",
    “hash”: ”<client hash>”
}
```

Response Syntax -

```
{
    “response”: “getstatus”,
    “success”: <bool value>,
    “id”: "<device id>",
    “type”: “<appliance/sensor>”,
    “value”: <value>,  // can be any data type
}
```

SetStatus :

Request Syntax -

```
{
    “request”: “setstatus”,
    “id”: "<device id>"
    “value”: “<on/off/toggle>”
    “hash”: “<client hash>”
}
```

Response Syntax -

```
{
    “response”: “setstatus”,
```

“success”: <bool value>,
“id”: "<device id>",
“value”: “<on/off>”,
}

EditTriggers :

Request Syntax -

{
“request”: “edittriggers”,
“triggers”: [
{
“triggerid”: <triggerid>, //order of preference
“sensor”: "<device id>",
“appliance”: "<device id>",
“condition”: <greater/lesser/equals>
“conditionvalue”: <value>
“setvalue”: “<on/off/>” //no toggle
},
{
“triggerid”: <triggerid>,
“sensor”: "<device id>",
“appliance”: "<device id>",
“condition”: <greater/lesser/equals>
“conditionvalue”: <value>
“setvalue”: “<on/off/>”
},
// and so on to include multiple triggers
],
“hash”: “<client hash>”
}

Response Syntax -

{
“response”: “edittriggers”,
“success”: <bool value>

}

GetDevices :

Request Syntax -

```
{
    “request”: “getdevices”,
    “hash”: ”<client hash>”
}
```

Response Syntax -

```
{
    “response”: “getdevices”,
    “devices”: [
        {
            “id”: "<device id>",
            “type”: “<appliance/sensor>”,
            “value”: <value>,  // can be any data type
        },
        {
            “id”: "<device id>",
            “type”: “<appliance/sensor>”,
            “value”: <value>,  // can be any data type
        }
        //and so on
    ]
}
```

GetTriggers :

Request Syntax -

```
{
    “request”: “gettriggers”,
    “hash”: ”<client hash>”
}
```

Response Syntax -

```
{
    “response”: “gettriggers”,
```

```
“triggers”: [
    {
        “triggerid”: <triggerid>, //order of preference
        “sensor”: "<device id>",
        “appliance”: "<device id>",
        “condition”: <greater/lesser/equals>
        “conditionvalue”: <value>
        “setvalue”: “<on/off/>” //no toggle
    },
    {
        “triggerid”: <triggerid>,
        “sensor”: "<device id>",
        “appliance”: "<device id>",
        “condition”: <greater/lesser/equals>
        “conditionvalue”: <value>
        “setvalue”: “<on/off/>”
    },
    // and so on to include multiple triggers
]
}
```

OnTrigger :

Response Syntax -

```
{
    “response”: “trigger”,
    “trigger”: <trigger id>,
    “id”: “<device id>”,
    “value”: “<on/off>”,
    “hash”: “<client hash>”
}
```

Error : //When one of the requests are invalid, this is the response

Response Syntax -

```
{
    “response”: “error”,
```

```
        “error”: “<error message>”
}
```